

SEQUENCE LISTING

APPROVED FOR PUBLICATION FEB 2006

<110> Jessberger, et al.

<120> METHODS FOR IDENTIFYING, TREATING, AND INDUCING INFERTILITY USING SMC1 BETA

<130> 29636/39363A

<150> US 60/499,317

<151> 2003-08-29

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<170> PatentIn version 3.2

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 Val Ser Ile Gln Thr Ser Leu Glu Gln Lys Arg Leu Glu Lys His Asn
 915 920 925
 Leu Leu Leu Asp Cys Lys Val Gln Asp Ile Glu Ile Ile Leu Leu Ser
 930 935 940
 Gly Ser Leu Asp Asp Ile Ile Glu Val Glu Met Gly Thr Glu Ala Glu
 945 950 955 960
 Ser Thr Gln Ala Thr Ile Asp Ile Tyr Glu Lys Glu Glu Ala Phe Glu
 965 970 975
 Ile Asp Tyr Ser Ser Leu Lys Glu Asp Leu Lys Ala Leu Gln Ser Asp
 980 985 990
 Gln Glu Ile Glu Ala His Leu Arg Leu Leu Leu Gln Gln Val Ala Ser
 995 1000 1005
 Gln Glu Asp Ile Leu Leu Lys Thr Ala Ala Pro Asn Leu Arg Ala
 1010 1015 1020
 Leu Glu Asn Leu Lys Thr Val Arg Asp Lys Phe Gln Glu Ser Thr
 1025 1030 1035
 Asp Ala Phe Glu Ala Ser Arg Lys Glu Ala Arg Leu Cys Arg Gln
 1040 1045 1050
 Glu Phe Glu Gln Val Lys Lys Arg Arg Tyr Asp Leu Phe Thr Gln
 1055 1060 1065

Cys Phe Glu His Val Ser Ile Ser Ile Asp Gln Ile Tyr Lys Lys
 1070 1075 1080
 Leu Cys Arg Asn Asn Ser Ala Gln Ala Phe Leu Ser Pro Glu Asn
 1085 1090 1095
 Pro Glu Glu Pro Tyr Leu Glu Gly Ile Ser Tyr Asn Cys Val Ala
 1100 1105 1110
 Pro Gly Lys Arg Phe Met Pro Met Asp Asn Leu Ser Gly Gly Glu
 1115 1120 1125
 Lys Cys Val Ala Ala Leu Ala Leu Leu Phe Ala Val His Ser Phe
 1130 1135 1140
 Arg Pro Ala Pro Phe Phe Val Leu Asp Glu Val Asp Ala Ala Leu
 1145 1150 1155
 Asp Asn Thr Asn Ile Gly Lys Val Ser Ser Tyr Ile Lys Glu Gln
 1160 1165 1170
 Thr Gln Asp Gln Phe Gln Met Ile Val Ile Ser Leu Lys Glu Glu
 1175 1180 1185
 Phe Tyr Ser Arg Ala Asp Ala Leu Ile Gly Ile Tyr Pro Glu Tyr
 1190 1195 1200
 Asp Asp Cys Met Phe Ser Arg Val Leu Thr Leu Asp Leu Ser Gln
 1205 1210 1215
 Tyr Pro Asp Thr Glu Gly Gln Glu Ser Ser Lys Arg His Gly Glu
 1220 1225 1230
 Ser Arg
 1235

<210> 5
 <211> 1406
 <212> DNA
 <213> Homo sapiens

<400> 5
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 cctgatcctg cgtgttctaa aaaccctta ggctttccat gggttccag accatggcgg 180
 tggcgctgcc cagggacttg cggcaggacg ccaacctggc aaagaggagg cacgcggagc 240
 tgtgcaggca gaagcgggtc ttcaacgcca gaaacaggat aattggggga gacactgaag 300

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cctgggatgt tcaagttcat gaccagaaga taaaagaagc tactgaaaaa gctagacatg      360
aaaccttttg tgctgaaatg aggcaaatg acaaatcat gtgcatattg gaaaaccgga      420
aaaagagggg taggaaaaat ctctgtaggg ctatcaatga cttccaacag agctttcaga      480
agccagaaac tcgccgtgaa tttgatctgt ccgacccoct agcccttaag aaagatcttc      540
cagcccggca gtcagataat gatgttcgga atacgatatc aggaatgcag aaattcatgg      600
gagaggattt aaacttccat gagaggaaga aattccaaga ggaacaaaac agagaatggt      660
ctttgcagca gcaaagggaa tggaagaacg cccgtgctga acaaaaatgc gcagaggccc      720
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gcaccaccag aaaggcagtt tgtgcatctg tgaaagactt caacaagagc caggccatcg      840
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tcaccaacct cctgcgtggg gacctgctct ccgagaacct gcagcaggca gccagctcct      960
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gccagcgaga cctggactgg gaccggcgga ggattcaggg ggctcgcgcc accctgctgt     1140
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aaccacggg agactatttc acacaattta atacaggaag tcgataatga ggaacacacc     1320
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aaaaaaaaaa aaaaaaaaaa aaaaaa                                     1406

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<210> 6
<211> 309
<212> PRT
<213> Homo sapiens
<400> 6

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Met Arg Gln Asn Asp Lys Ile Met Cys Ile Leu Glu Asn Arg Lys Lys
1           5           10           15

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Arg Asp Arg Lys Asn Leu Cys Arg Ala Ile Asn Asp Phe Gln Gln Ser
20           25           30

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Phe Gln Lys Pro Glu Thr Arg Arg Glu Phe Asp Leu Ser Asp Pro Leu
35           40           45

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Ala Leu Lys Lys Asp Leu Pro Ala Arg Gln Ser Asp Asn Asp Val Arg
50           55           60

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Asn Thr Ile Ser Gly Met Gln Lys Phe Met Gly Glu Asp Leu Asn Phe

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65		70		75		80
His Glu Arg Lys Lys Phe Gln Glu Glu Gln Asn Arg Glu Trp Ser Leu						
	85			90		95
Gln Gln Gln Arg Glu Trp Lys Asn Ala Arg Ala Glu Gln Lys Cys Ala						
	100			105		110
Glu Ala Leu Tyr Thr Glu Thr Arg Leu Gln Phe Asp Glu Thr Ala Lys						
	115			120		125
His Leu Gln Lys Leu Glu Ser Thr Thr Arg Lys Ala Val Cys Ala Ser						
	130			135		140
Val Lys Asp Phe Asn Lys Ser Gln Ala Ile Glu Ser Val Glu Arg Lys						
	145			150		155
Lys Gln Glu Lys Lys Gln Glu Gln Glu Asp Asn Leu Ala Glu Ile Thr						
				165		170
Asn Leu Leu Arg Gly Asp Leu Leu Ser Glu Asn Pro Gln Gln Ala Ala						
				180		185
Ser Ser Phe Gly Pro His Arg Val Val Pro Asp Arg Trp Lys Gly Met						
	195			200		205
Thr Gln Glu Gln Leu Glu Gln Ile Arg Leu Val Gln Lys Gln Gln Ile						
	210			215		220
Gln Glu Lys Leu Arg Leu Gln Glu Glu Lys Arg Gln Arg Asp Leu Asp						
	225			230		235
Trp Asp Arg Arg Arg Ile Gln Gly Ala Arg Ala Thr Leu Leu Phe Glu						
				245		250
Arg Gln Gln Trp Arg Arg Gln Arg Asp Leu Arg Arg Ala Leu Asp Ser						
				260		265
Ser Asn Leu Ser Leu Ala Lys Glu Gln His Leu Gln Lys Lys Tyr Met						
	275			280		285
Asn Glu Val Tyr Thr Asn Gln Pro Thr Gly Asp Tyr Phe Thr Gln Phe						
	290			295		300
Asn Thr Gly Ser Arg						
	305					

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 <211> 1654
 <212> DNA
 <213> Mus musculus

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 tgtttttttt ttccggatag ctcttgaagc ccagccgagt cccagagcca tggaggtagc 180
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 caggcagggg cggatcttcg acgccaggaa caggatcatt gggggagaca cacaagcctg 300
 ggattttcaa gtccgtgacc agaagataaa agaaataact gacaaagcta ggcatagaagc 360
 ctttgcgtgct gaaatgaagc acaatgacaa agtcatgtgc atggcgcatg accgggaaca 420
 gaggcacagg aaacagctgt gtagagctat caatgacttc cagcagaact ttcagaagcc 480
 agaaactcga cgtgagtttg atctttctga cccctggcc ctccagaaag agcttccagc 540
 ccgcatttca gacaatgaca tgcggaacac catatcagga atgcagaagt tcatgggaga 600
 ggatttaaac ttccaagaga ggaggaggtt ccaaaggaa cagagcagag aatggtttct 660
 gcagcagcat ggggaacggg agaaagcccg ggctgaccac ctactggcag aacacctcca 720
 cactcagacg agactcaagt ttgatgaaac agccagagag ttgatgaagc tggagggtc 780
 caccaggaag gaagtctgcg cagccgtgaa agcgttcaac aagaatcagg ttgtggagtt 840
 gacagaaaga aagaggcaag agaagcaaca agaacaagaa gacaacatga ccgagatcac 900
 caacctgctg catggagacc tgctttctga gaacctcga ccggtggcca gctcctttgg 960
 gtctcaccgt gtggtccttg accgctggaa gggcatgaac egagagcagc tggaggagat 1020
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<210> 8
 <211> 309
 <212> PRT
 <213> Mus musculus

<400> 8

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Met Lys His Asn Asp Lys Val Met Cys Met Ala His Asp Arg Glu Gln
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Arg His Arg Lys Gln Leu Cys Arg Ala Ile Asn Asp Phe Gln Gln Asn
          20          25          30

Phe Gln Lys Pro Glu Thr Arg Arg Glu Phe Asp Leu Ser Asp Pro Leu
          35          40          45

Ala Leu Gln Lys Glu Leu Pro Ala Arg Ile Ser Asp Asn Asp Met Arg
          50          55          60

Asn Thr Ile Ser Gly Met Gln Lys Phe Met Gly Glu Asp Leu Asn Phe
65          70          75          80

Gln Glu Arg Arg Arg Phe Gln Lys Glu Gln Ser Arg Glu Trp Phe Leu
          85          90          95

Gln Gln His Gly Glu Arg Glu Lys Ala Arg Ala Asp His Leu Leu Ala
          100          105          110

Glu His Leu His Thr Gln Thr Arg Leu Lys Phe Asp Glu Thr Ala Arg
          115          120          125

Glu Leu Met Lys Leu Glu Gly Ser Thr Arg Lys Glu Val Cys Ala Ala
          130          135          140

Val Lys Ala Phe Asn Lys Asn Gln Val Val Glu Leu Thr Glu Arg Lys
          145          150          155          160

Arg Gln Glu Lys Gln Gln Glu Gln Glu Asp Asn Met Thr Glu Ile Thr
          165          170          175

Asn Leu Leu His Gly Asp Leu Leu Ser Glu Asn Pro Arg Pro Val Ala
          180          185          190

Ser Ser Phe Gly Ser His Arg Val Val Leu Asp Arg Trp Lys Gly Met
          195          200          205

Asn Arg Glu Gln Leu Glu Glu Ile Trp Phe Thr Gln Lys Arg Gln Ile
          210          215          220

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Gln Glu Lys Leu Arg Leu Gln Glu Glu Glu Arg Gln His Ser Met Asp
 225 230 235 240

Trp Asp Leu Arg Arg Ile Arg Lys Ala His Ala Ser Leu Leu His Glu
 245 250 255

Arg Gln Gln Gln Arg Leu Leu Arg Glu Gln Arg Arg Ala Leu Asp Cys
 260 265 270

Ser Asn Leu Asn Leu Ala Arg Gln Gln Tyr Leu Gln Lys Lys Gln Met
 275 280 285

Asn Thr Ala Ser Ser Ser Gln Pro Thr Glu Asp Tyr Phe Ser Gln Phe
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Asn Thr Arg Ser Arg
 305

<210> 9
 <211> 336
 <212> DNA
 <213> Mus musculus

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 <223> n is a, c, g, or t

<220>
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 <222> (159)..(159)
 <223> n is a, c, g, or t

<220>
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 tggtagcagc agaaaccagg tcagtctcct aaactgctna tctactgggc atccactnng 180
 gaatctgggg tccctgatcg cttcacaggc agtggatctg ggacagattt cactctcacc 240

atcagcagtg tgcagactga agacctggca gtttattact gcaagcaatc ttatnatctc 300
 ttcacgttcg gctcggggac aaagttggaa atnaaa 336

<210> 10
 <211> 29
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic primer

<400> 10
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<210> 11
 <211> 25
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic primer

<400> 11
 ttttaccggt gcctcagccg cttcc 25

<210> 12
 <211> 278
 <212> DNA
 <213> Mus musculus

<400> 12
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 gcaacgcca cctccgttgt aagcaacggc gcctcgctcg ctctccttcc cccgcgccag 180
 tctcgcgaga cttcgaaaag aatttcttcc cgcgcttttt tttttttttt tcctcacggg 240
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<210> 13
 <211> 267
 <212> DNA
 <213> Homo sapiens

<400> 13
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 tacagacgct cccgctctct cggaaatgtc aacaactcgt tgctaaggaa cggctccgcg 180
 cttgccgcgt ctcgctctct tctcgcgaca cttggcgaat cccttcccgc gctttttccg 240
 cgggcgcttg ataacgcggg tgaggcg 267